

Claims

1. The use of compounds of general formulae (I), (II) and (III) wherein R^1 and R^2 independently represent a hydrogen atom or a straight or
5 branched C_{1-6} alkyl group optionally substituted with a phenyl group, or
 R^1 and R^2 together with the nitrogen atom attached thereto form a 5-7
membered saturated heterocyclic ring optionally containing further nitrogen
and/or oxygen heteroatoms, which heterocyclic ring is optionally substituted
with one or more hydroxy, oxo or benzyl groups,
- 10 A represents a phenyl group optionally substituted with one or more C_{1-4}
alkyl, C_{1-4} haloalkyl or nitro groups or halogen atoms, or a 5-6 membered
heteroaromatic ring containing one or more nitrogen, oxygen or sulfur
heteroatoms, optionally having N-oxide structure on the nitrogen heteroatom,
n is zero, 1 or 2,
- 15 z is zero or 1,
in compounds of general formulae (I), X represents a halogen atom or –
 NR^4R^5 group, where R^4 and R^5 independently represent a hydrogen atom or
a straight or branched C_{1-6} alkyl group,
in compounds of general formulae (II), X refers to oxygen atom,
- 20 R^3 represents a hydrogen atom or a straight or branched C_{1-6} alkyl group,
Y represents a hydrogen atom or hydroxy group, halogen atom or C_{1-22}
acyloxy group, with the restriction that if R^4 and R^5 are simultaneously
hydrogen atoms, Y is other than hydroxy group,
with the proviso that in compounds of general formulae (I) and (II) where Y
25 is other than halogen,
- a) R^1 and R^2 together with the nitrogen atom attached thereto form a
5-7 membered, saturated heterocyclic ring optionally containing further
nitrogen and/or oxygen heteroatom, which heterocyclic ring is substituted
with one or more hydroxy, oxo or benzyl groups and/or

b) A is a N-containing heteroaromatic ring, which has N-oxide structure on the nitrogen heteroatom, and/or

c) z is 1,

with the further proviso that if X is halo and Y is hydroxy or acyloxy in
5 compounds of general formulae (I),

R¹ and R² together with the nitrogen atom attached thereto form a 5-7 membered, saturated heterocyclic ring optionally containing further nitrogen and/or oxygen heteroatom, which heterocyclic ring is substituted with one or more hydroxy, oxo or benzyl groups and
10 with the proviso for compounds of general formulae (III) that if R¹ and R² independently represent a hydrogen atom or a straight or branched C₁₋₆ alkyl group optionally substituted with a phenyl group, or together with the nitrogen atom attached thereto form a 5-7 membered saturated heterocyclic ring optionally containing further nitrogen and/or
15 oxygen heteroatoms, then A is a heteroaromatic ring containing oxygen or sulfur heteroatom or an N-containing heteroaromatic ring having N-oxide structure on the nitrogen heteroatom and if A is a phenyl group optionally substituted with one or more C₁₋₄ alkyl, C₁₋₄ haloalkyl or nitro groups or halogen atoms, or a 5-6 membered N-containing
20 heteroaromatic ring, then R¹ and R² together with the nitrogen atom attached thereto form a 5-7 membered, saturated heterocyclic ring optionally containing further nitrogen and/or oxygen heteroatom, which heterocyclic ring is substituted with one or more hydroxy, oxo or benzyl groups, and of the salts and optically active forms of the above compounds for the
25 production of pharmaceutical products used in the treatment and/or prevention of vascular diseases or diseases related to vascular disorders.

2. Compounds of general formulae (I) wherein

R¹ and R² independently represent a hydrogen atom or a straight or branched C₁₋₆ alkyl group optionally substituted with a phenyl group, or

R¹ and R² together with the nitrogen atom attached thereto form a 5-7 membered saturated heterocyclic ring optionally containing further nitrogen and/or oxygen heteroatoms, which heterocyclic ring is optionally substituted with one or more hydroxy, oxo or benzyl groups,

5 A represents a phenyl group optionally substituted with one or more C₁₋₄ alkyl, C₁₋₄ haloalkyl or nitro groups or halogen atoms, or a 5-6 membered heteroaromatic ring containing one or more nitrogen, oxygen or sulfur heteroatoms, optionally having N-oxide structure on the nitrogen heteroatom, n is zero, 1 or 2,

10 z is zero or 1,

X represents a halogen atom or -NR⁴R⁵ group, where R⁴ and R⁵ independently represent a hydrogen atom or a straight or branched C₁₋₆ alkyl group,

Y represents a hydrogen atom or hydroxy group, halogen atom or C₁₋₂₂ acyloxy group, with the restriction that if R⁴ and R⁵ are simultaneously hydrogen atoms, then Y is other than hydroxy group,
15 with the proviso that

a) if Y is hydrogen and/or X is a -NR⁴R⁵ group, where R⁴ and R⁵ have the above meanings,

20 R¹ and R² together with the nitrogen atom attached thereto form a 5-7 membered, saturated heterocyclic ring optionally containing further nitrogen and/or oxygen heteroatom, which heterocyclic ring is substituted with one or more hydroxy, oxo or benzyl groups and/or

A is a N-containing heteroaromatic ring, which has N-oxide structure
25 on the nitrogen heteroatom, or

b) if X is halo and Y is hydroxy or acyloxy,

R¹ and R² together with the nitrogen atom attached thereto form a 5-7 membered, saturated heterocyclic ring optionally containing further nitrogen and/or oxygen heteroatom, which heterocyclic ring is substituted with one or
30 more hydroxy, oxo or benzyl groups,

and the stereoisomers of the above compounds and their salts.

3. Compounds of general formulae (II) wherein

R¹ and R² independently represent a hydrogen atom or a straight or branched C₁₋₆ alkyl group optionally substituted with a phenyl group, or

- 5 R¹ and R² together with the nitrogen atom attached thereto form a 5-7 membered saturated heterocyclic ring optionally containing further nitrogen and/or oxygen heteroatoms, which heterocyclic ring is optionally substituted with one or more hydroxy, oxo or benzyl groups,

- 10 A represents a phenyl group optionally substituted with one or more C₁₋₄ alkyl, C₁₋₄ haloalkyl or nitro groups or halogen atoms, or a 5-6 membered heteroaromatic ring containing one or more nitrogen, oxygen or sulfur heteroatoms, optionally having N-oxide structure on the nitrogen heteroatom, n is zero, 1 or 2,

z is zero or 1,

- 15 X represents an oxygen atom,

R³ represents a hydrogen atom or a straight or branched C₁₋₆ alkyl group,

Y represents a hydrogen atom or hydroxy group, halogen atom or C₁₋₂₂ acyloxy group,

with the proviso that if Y is other than halo,

- 20 R¹ and R² together with the nitrogen atom attached thereto form a 5-7 membered, saturated heterocyclic ring optionally containing further nitrogen and/or oxygen heteroatom, which heterocyclic ring is substituted with one or more hydroxy, oxo or benzyl groups and/or

- 25 A is a N-containing heteroaromatic ring, which has N-oxide structure on the nitrogen heteroatom,

and the stereoisomers of the above compounds and their salts.

4. Compounds of general formulae (III) wherein

R¹ and R² independently represent a hydrogen atom or a straight or branched C₁₋₆ alkyl group optionally substituted with a phenyl group, or

R¹ and R² together with the nitrogen atom attached thereto form a 5-7 membered saturated heterocyclic ring optionally containing further nitrogen and/or oxygen heteroatoms, which heterocyclic ring is optionally substituted with one or more hydroxy, oxo or benzyl groups,

- 5 A represents a phenyl group optionally substituted with one or more C₁₋₄ alkyl, C₁₋₄ haloalkyl or nitro groups or halogen atoms, or a 5-6 membered heteroaromatic ring containing one or more nitrogen, oxygen or sulfur heteroatoms, optionally having N-oxide structure on the nitrogen heteroatom, n is zero, 1 or 2,
- 10 z is zero or 1,
with the proviso that
if R¹ and R² independently represent a hydrogen atom or a straight or branched C₁₋₆ alkyl group optionally substituted with a phenyl group,
or together with the nitrogen atom attached thereto form a 5-7 membered
15 saturated heterocyclic ring optionally containing further nitrogen and/or oxygen heteroatoms, then A is a heteroaromatic ring containing oxygen or sulfur heteroatom or an N-containing heteroaromatic ring having N-oxide structure on the nitrogen heteroatom and
if A is a phenyl group optionally substituted with one or more C₁₋₄ alkyl, C₁₋₄
20 haloalkyl or nitro groups or halogen atoms, or a 5-6 membered N-containing heteroaromatic ring, then R¹ and R² together with the nitrogen atom attached thereto form a 5-7 membered, saturated heterocyclic ring optionally containing further nitrogen and/or oxygen heteroatom, which heterocyclic ring is substituted with one or more hydroxy, oxo or benzyl groups,
25 and the stereoisomers of the above compounds and their salts.

5. N-[3-(1-piperidinyl)propoxy]-pyridin-1-oxide-3-carboxamidine and its salts.

6. N-[3-(1-piperidinyl)propoxy]-pyridin-1-oxide-3-carboximidoyl chloride and its salts.

7. N-[2-hydroxy-3-(1-piperidinyloxy)propoxy]-N'-n-butyl-pyridin-1-oxide-4-carboxamide, its stereoisomers, and their salts.
8. N-[3-(1-oxido-1-piperidinyloxy)propoxy]-3-nitro-benzimidoyl-chloride, its hydrates and salts.
- 5 9. 2-chloro-N-[3-(4-oxido-4-morpholinoxy)propoxy]-benzimidoyl chloride and its salts.
10. 5,6-dihydro-5-[(1-piperidinyloxy)methyl]-3-(1-oxido-3-pyridyl)-4H-1,2,4-oxadiazine, its stereoisomers, and their salts.
11. 5,6-dihydro-5-[(4-benzyl-1-piperidinyloxy)methyl]-3-(3-pyridyl)-4H-1,2,4-oxadiazine, its stereoisomers, and their salts.
- 10 12. 5,6-dihydro-5-[(2-oxo-1-piperidinyloxy)methyl]-3-(3-pyridyl)-4H-1,2,4-oxadiazine, its stereoisomers, and their salts.
13. 5,6-dihydro-5-[(1-piperidinyloxy)methyl]-3-(1-oxido-3-pyridyl)-4H-1,2,4-oxadiazine, its stereoisomers, and their hydrates and salts.
- 15 14. 5,6-dihydro-5-[(1-oxido-1-piperidinyloxy)methyl]-3-(1-oxido-3-pyridyl)-4H-1,2,4-oxadiazine, its stereoisomers, and their salts.
15. 5,6-dihydro-5-[(4-hydroxy-1-piperidinyloxy)methyl]-3-(3-pyridyl)-4H-1,2,4-oxadiazine, its stereoisomers, and their salts.
16. N-[2-chloro-3-(1-piperidinyloxy)propoxy]-3-benzimidoyl-chloride hydrochloride, its stereoisomers, and their salts.
- 20 17. N-[2-hydroxy-3-(1-piperidinyloxy)propoxy]-pyridin-1-oxide-3-carboxamide, its stereoisomers, and their salts.
18. Pharmaceutical composition containing a compound of general formulae (I) as active ingredient, where R^1 , R^2 , A, X, Y, n and z are as defined in Claim 2.
- 25 19. Pharmaceutical composition containing a compound of general formulae (II) as active ingredient, where R^1 , R^2 , R^3 , A, X, Y, n and z are as defined in Claim 3.

20. Pharmaceutical composition containing a compound of general formulae (III) as active ingredient, where R^1 , R^2 , A, n and z are as defined in Claim 4.